IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
Charleston Division

STERLING MISANIN, et al., *Plaintiffs*, v. ALAN WILSON, in his official capacity as the Attorney General of South Carolina, et al., *Defendants*.	Case No. 2:24-cv-04734-RMG

EXPERT REBUTTAL DECLARATION OF DAN H. KARASIC, M.D.

I, Dan H. Karasic, M.D., hereby declare and state as follows:

1. I am over 18 years of age, of sound mind, and in all respects competent to testify.

2. I have been retained by counsel for Plaintiffs as an expert in connection with the above-captioned litigation.

3. I have actual knowledge of the matters stated herein. If called to testify in this matter, I would testify truthfully and based on my expert opinion.

4. I incorporate as part of this rebuttal declaration my opinions and qualifications as set forth in my initial expert declaration in this matter, which is dated August 21, 2024 and was filed on August 30, 2024.

5. I submit this rebuttal declaration to respond to the expert declaration of Dr. James Cantor, including attachments, as well as statements made in the Defendants' Response in Opposition to Plaintiffs' Motion for Preliminary Injunction (the "Response").[1]

6. In this rebuttal, I respond to some of the central points made in Dr. Cantor's declaration and the Response. I do not address each and every assertion made in those documents that I believe are baseless, misleading, or mischaracterizations of the evidence, as there are many. Instead, my aim is to provide an explanation of the erroneous premises upon which their conclusions are based.

7. In preparing this rebuttal declaration, I relied on my training and years of research and clinical experience, as set out in my curriculum vitae attached to my initial expert declaration, and on the materials listed therein; the materials referenced in my initial declaration and listed in the bibliography attached thereto; and on the materials referenced herein and the supplemental bibliography attached as **Exhibit C**. I reserve the right to revise and supplement the opinions expressed in this report or the bases for them if any new information becomes available in the future, including as a result of new scientific research or publications or in response to statements and issues that may arise in my area of expertise.

REBUTTAL OPINIONS

A. GENDER DYSPHORIA IS A MEDICAL CONDITION

8. Gender Dysphoria is a serious medical condition that warrants medical treatment when appropriate. It is characterized by the distress resulting from the misalignment between a person's gender identity, which has biological bases, and their

[1] Dr. Cantor is well known for his work with paraphilias, and in particular with pedophiles, but not for his work with transgender people. Paraphilias are persistent and recurrent sexual interests, urges, fantasies, or behaviors of marked intensity involving objects, activities, or even situations that are atypical in nature. Being transgender is not a paraphilic disorder

body (i.e., physical characteristics). Gender dysphoria is listed as a mental disorder in the Diagnostic and Statistical Manual of Mental Disorders, the DSM-5-TR, because the diagnosis focuses on the significant distress resulting between the incongruence between one's gender identity and body, Gender Incongruence is listed outside of the mental disorders section in the International Classification of Diseases, ICD-11, in recognition of its status as a medical condition that may require treatment with medication and surgery. Dr. Cantor's assertion that "Gender dysphoria is nowhere defined as a medical … diagnosis" (Cantor ¶ 123) is thus inaccurate.

9. In my over thirty years of clinical experience working with thousands of adolescents and young adults with gender dysphoria, psychotherapy has been a central part of treating minors with gender dysphoria, as it is with many conditions; and diagnosing and treating gender dysphoria involves careful assessment, differential diagnosis and management of comorbid conditions. Though psychotherapy can be a critical part of managing a patient's well-being, psychotherapy is not sufficient for those needing medical intervention to treat the patient's dysphoria which stems from the incongruence between a patient's physiological sex-based characteristic and gender identity.

B. Gender dysphoria is not a subjective diagnosis.

10. Dr. Cantor seems to imply that medical treatment should not be provided to transgender adolescents because, according to him, "Gender identity refers to subjective feelings that cannot be defined, measured, or verified by science." (Cantor ¶ 122). This is incorrect. A patient may self-report their gender identity, but Gender Dysphoria is a well-recognized medical diagnosis made by a clinician. Indeed, clinical interviews with patients are typically used to diagnose other DSM and non-DSM diagnoses and determine treatment. This widely used assessment tool is not unique to gender dysphoria.

11. As a psychologist, Dr. Cantor must know that most DSM-5 psychiatric diagnoses are made via an evaluation which may include, among other things, the psychiatric interview of the patient, a review of records, and an interview with parents in the case of a minor patient. The diagnosis of Gender Dysphoria under the DSM-5 is made the same way as other DSM diagnoses, through an evaluation in which the health professional determines if DSM-5 diagnostic criteria are met. Mental health professionals are well-trained to conduct such interviews. The validity and reliability of DSM-5 diagnoses were assessed and determined in the process of creating the DSM-5. Clinicians do not simply defer to the reported experiences of the patient, but instead rely on the application of professional experience and expertise to assess whether the patient meets the relevant diagnostic criteria. Similarly, the ICD-11 diagnosis of Gender Incongruence is made by an evaluation which includes an interview of the patient. The World Health Organization conducted field studies internationally on the reliability and validity of the Gender Incongruence diagnosis of ICD-11. (de Vries, et al 2021).

C. Dr. Cantor offers no alternative effective treatment for adolescents with gender dysphoria.

12. Dr. Cantor disapproves of existing protocols for treating gender dysphoria in adolescents, but he offers no alternative treatments for this condition, let alone ones supported by the evidentiary standards he holds the existing protocols to.

13. Psychotherapy generally is certainly appropriate and is an aspect of care for children and adolescents with gender dysphoria. But those types of interventions do not resolve the dysphoria when medical interventions are indicated and are not alternatives to medical interventions for adolescents who need them. My initial declaration discusses the harms that can result from the denial of medically indicated gender-affirming medical care.

14. Dr. Cantor discusses the "Dutch Protocol" as if it were an alternative treatment approach to the existing treatment paradigms outlined in the WPATH SOC 7, WPATH SOC 8, and the Endocrine Society Guideline. (See Cantor ¶¶ 305-313). The Dutch team defines "the Dutch Protocol [as] consisting of a gonadotropin-releasing hormone agonist (GnRHa) to halt puberty and subsequent gender-affirming hormones (GAHs) … implemented to treat adolescents with gender dysphoria." (van der Loos, 2023). The Dutch team states that for "prepubertal children [the team] adopted a "watchful waiting" approach. This approach meant that the child returned to the gender identity clinic only when puberty had begun. The child was not seen in the meanwhile because medical intervention is not provided to prepubertal children at our clinic." While there are studies finding that many prepubertal children diagnosed with Gender Identity Disorder (a precursor diagnosis to Gender Dysphoria in Children) identified with their sex assigned at birth at a later follow up, gender dysphoria that continues into adolescence is very unlikely to desist. (DeVries, et al., 2011, Wiepjies, et al. 2018, Brik, et al., 2020). Hence, the Dutch researchers who coined the term "watchful waiting" for prepubertal children also did the seminal research on medical interventions for those patients whose gender dysphoria persists until adolescence. (de Vries, 2011; Steensma, 2011; de Vries, 2014).

15. There is likewise no basis for suggesting that providing gender-affirming care will cause youth with gender dysphoria who would otherwise desist to, instead, persist. This claim erroneously relies on the assertion that social transition in prepubertal children can cause their gender dysphoria to persist into adolescence. First, the fact that there is a correlation between social transition prior to puberty and persistence does not establish that social transition causes persistence of gender dysphoria. The intensity of gender dysphoria prior to puberty predicted persistence, and children with more intense dysphoria were more likely to socially transition. (Steensma, 2013). Rae, et al. (2019) found that "stronger cross-sex identification and preferences expressed by gender- nonconforming children at initial

testing predicted whether they later socially transitioned." Regardless of what conclusions can be drawn from these desistance studies about the impact of gender affirmation on the persistence rates in prepubertal children, this research does not apply to adolescents with gender dysphoria, for whom desistance is rare, and the treatments banned by HB 808 are not indicated until adolescence.

16. The suggestion that adolescents can just wait until they are 18 years old to get care ignores the harm of not providing the care. Allowing endogenous puberty to advance is not a neutral decision. For many adolescents, the development of secondary sex characteristics that do not match their gender identity can have a severe negative impact on their mental health and can exacerbate lifelong dysphoria because some of those characteristics are impossible to change later through surgeries. In addition, youth may suffer needlessly from untreated gender dysphoria while waiting to turn 18.

D. Dr. Cantor's critique regarding systematic reviews.

17. Dr. Cantor refers to purported systematic reviews of the literature examining gender-affirming care for minors to argue that there is not sufficient evidence supporting the provision of this care.

18. But, with the exception of the Swedish review, which was commissioned by a government agency and later published (Ludvigsson, et al., 2023), the reviews upon which Dr. Cantor relies are reports authored or commissioned by government committees that have not been published in any medical or scientific journals and have not been subjected to the peer-review process. Moreover, some of these reports do not include the most recent research demonstrating the efficacy of the banned treatments and others do not address all the relevant literature.

19. Further, it is important to put GRADE scores of systematic reviews in context. Only a small percentage of systematic reviews of medical interventions have a

high GRADE score; for a majority of systematic reviews of medical interventions, GRADE scores are low or very low. (Fleming et al., 2016, Howick, et al., 2020). For complex interventions, for which gender affirming care certainly qualifies, no high GRADE scores were found for systematic reviews of any complex intervention. (Movsisyan, et al., 2016).

20. If only medical interventions with high GRADE scores were permitted by law, most medical interventions and all complex interventions would be banned. In a study of systematic reviews of interventions in anesthesiology, critical care medicine, and emergency medicine, only 10% had high GRADE scores, but banning the practice of anesthesiology, critical care medicine, and emergency medicine has not been contemplated (Conway, et al, 2017). Chong, et al., 2023 found that only 36% of national guidelines for care were based on strong or moderate GRADE scores. Recommendations are based on a comparison with alternatives; there is no evidence base to support conversion therapy or other psychotherapeutic interventions as an alternative for those who need gender-affirming medical treatment.

21. Many treatments for other conditions are widely accepted and in use without having been studied through randomized, controlled clinical trials. And many drugs for cancer and hematologic disorders have been FDA approved without a randomized controlled trial (Hatswell, et al., 2016). Other drugs have been FDA approved with randomized controlled trials for one indication but are commonly used for another condition or in a different population than the one for which it was approved (Wittich, et. al., 2012).

22. Dr. Cantor relies heavily on a so-called "systematic review of systematic reviews" authored by Romina Brignardello-Petersen and Wojtek Wiercioch. (Cantor ¶ 90). This "review" was commissioned by Florida Agency for Health Care Administration in

support of its since invalidated rule prohibiting Medicaid coverage for medical treatment of gender dysphoria.[2]

23. Brignardello-Petersen and Wiercioch performed a manual search of websites that includes only one non-governmental organization site: the Society for Evidence-Based Gender Medicine (SEGM). The fact that SEGM was chosen instead of much larger and more established organizations representing the mainstream of care, e.g., the American Psychological Association, the American Medical Association, or the American Psychiatric Association, raises a concern for bias, as SEGM is a small group founded recently specifically in opposition to gender-affirming care. Of note, Brignardello-Petersen disclosed at the 2023 SEGM conference that SEGM is funding her systematic reviews.

24. Even then the review by Brignardello-Petersen and Wiercioch still found that that "Low certainty evidence suggests that after treatment with puberty blockers, people with gender dysphoria experience a slight increase in gender dysphoria, and an improvement in depression, and anxiety." Similarly, it found that "Low certainty evidence suggests that after treatment with cross-sex hormones, people with gender dysphoria experience an improvement in gender dysphoria, depression, anxiety, and suicidality."

E. Dr. Cantor's critiques of specific studies are baseless.

25. Dr. Cantor cites a Finnish study as evidence for his conclusion that adolescents should not be prescribed gender-affirming hormones because they are supposedly not effective in the treatment of gender dysphoria. (Kaltiala, et al, 2020). However, in that study, the need for treatment for depression dropped from 54% of the

[2] Dr. Brignardello-Petersen is a dentist who is an assistant professor in the Department of Health Research Methods, Evidence, and Impact at McMaster University in Canada. Dr. Wiercioch is a post-doctoral research fellow in the same department as Dr. Brignardello-Petersen. Both authors report no academic interests in the care of people with gender dysphoria.

youth to 15%; the need for treatment for anxiety dropped from 48% of the youth to 15%; and the need for treatment for suicidality/self-harm dropped from 35% to 4%. All of these were statistically highly significant changes.

26. Dr. Cantor states that the study by Kuper, et al. 2020 did not show benefit from treatment. This statement is misleading at best. The article concludes, "Youth reported large improvements in body dissatisfaction ($P < .001$), small to moderate improvements in self-report of depressive symptoms ($P < .001$), and small improvements in total anxiety symptoms ($P < .01$)." (Kuper, et al., 2020). Dr. Cantor further states that the study by Achille et al. does not show that those studied benefitted from endocrine treatment. Again, Dr. Cantor's characterization of this study's conclusion is misleading. The results of the paper actually show that, "Mean depression scores and suicidal ideation decreased over time while mean quality of life scores improved over time. When controlling for psychiatric medications and engagement in counseling, regression analysis suggested improvement with endocrine intervention. This reached significance in male- to-female participants." (Achille, et al., 2020).

F. Dr. Cantor's claim that there is an international consensus against the provision of gender-affirming medical is not accurate.

27. Dr. Cantor claims that prohibiting gender-affirming medical treatment for transgender adolescents with gender dysphoria is consistent with a so-called international consensus. This is completely false. None of the countries to which Dr. Cantor refers has banned gender-affirming medical care for adolescents with gender dysphoria as South Carolina's ban does. To the contrary, all agree that medical treatment, including puberty blockers and hormone therapy, are appropriate in some circumstances. Dr. Cantor refers to the interim and final reviews on care of transgender youth in the United Kingdom's National Health System compiled by Dr. Hilary Cass. The interim report stated that the final report would synthesize published evidence with expert opinion and stakeholder

input. Notably, the interim report recommended increasing the number of health providers, shortening wait times, and increasing the number of centers across the country providing care to transgender youth. Dr. Cantor claims that the final Cass Review "unambiguously confirm[s] that the procedures fail to meet the standards of evidence-based medicine and their implementation [is] unjustified." (Cantor ¶ 96). That is not true. The Cass Review does not support banning gender-affirming medical care for minors the way that South Carolina has. Like the Endocrine Society Guidelines and WPATH Standards of Care, the Cass Review agrees that some youth with gender dysphoria will benefit from medical care, while that care may not be appropriate for other candidates. Dr. Cass herself has states that "there are young people who absolutely benefit from a medical pathway, and we need to make sure those young people have access—under a research protocol, because we need to improve the research—but not assume that's the right pathway for everyone."[3] WPATH SOC 8 similarly states, "For some youth, obtaining gender-affirming medical treatment is important while for others these steps may not be necessary."[4]

28. Dr. Cantor also glosses over some of the methodological weaknesses in the systematic reviews underlying the Cass Review. For example, while Dr. Cantor notes that the study authors pre-registered their protocols (Cantor ¶ 97), he fails to mention that the study authors inappropriately changed their methodology without commenting on the change in their manuscript. Pre-registration is a process by which researchers make public their study protocol prior to beginning their research, which prevents them from later changing the study protocol if they do not like the results. While the authors of the Cass

[3] New York Times interview with Dr. Hilary Cass. Available at: https://www nytimes.com/2024/05/13/health/hilary-cass-transgender-youth-puberty-blockers html. Accessed: Nov. 7, 2024.
[4] Coleman, E., (2022). at 23(sup1), S51.

Review's systematic reviews pre-registered their study[5] and stated they would assess the quality of the research using the Mixed Methods Appraisal Tool (MMAT), in their final manuscripts, they switched to a different scale: a modified version of the Newcastle-Ottawa Scale. They did not comment on this change and provided no reason for the change. This is a clear deviation from the standard academic publishing practices that minimize bias in the publishing of systematic reviews. (McNamara, et al 2024).

29. Swedish, Norwegian, and Finnish national health authorities, which Dr. Cantor also references, have recommended more research but have not banned care for transgender youth. In Sweden, one of the six gender centers caring for transgender adolescents stopped taking new patients in 2021 until new national guidelines were released in 2022, but continued to provide care to those already in treatment, and new patients were accepted at other gender centers. After the national guidelines were released, care to new patients resumed at that gender center, and continued to be provided at the other gender centers. In these countries, gender-affirming care for adults and for youth who qualify is fully paid for by the national health system of each country. Cantor states that Finland halted surgery for trans youth in 2020, but surgery was already restricted there to those 18 and over, while puberty blockers and hormones remain available when clinicians deem them necessary.

30. The provision of care for transgender youth has not been limited in France.

31. Gender-affirming care continues to be provided by teams of gender affirming care providers across Europe, as demonstrated by the sessions at the 2023 European Professional Association for Transgender Health conference and the 2024 WPATH

[5] Fraser, L. et al. The epidemiology, management, and outcomes of children with gender-related distress / gender dysphoria: a systematic review. PROSPERO. Available at: https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=289659. Accessed: Nov. 7, 2024.

conference, held in Lisbon. Thomas Steensma of the Dutch research team has explicitly rejected the concepts of Rapid Onset Gender Dysphoria and social contagion that have been used by opponents of gender affirming care for minors (Broderick, 2023). Dr. Cantor does not provide care for gender dysphoric youth in his home country of Canada, but such care is widely available in Canada. Gender-affirming care for youth remains available in other parts of the world, including Australia, New Zealand, South Africa, Uruguay, Argentina, Brazil, Chile, and Israel. The outliers that ban gender-affirming medical care for minors are some American states, as well as Russia.

32. There remains strong international support for the continued provision of gender-affirming medical and surgical care. Experts from around the world collaborated on WPATH Standards of Care Version 8. I was chapter lead of the Mental Health chapter of this version, and the authors of that chapter include psychiatrists who are leaders of transgender health programs in Belgium, Sweden, and Turkey. There is broad agreement in philosophy of care, including support for gender-affirming care and opposition to conversion therapy.

G. Dr. Cantor draws inappropriate conclusions from the numbers and sex ratios of gender clinic referrals.

33. Dr. Cantor devotes many pages to the increase in the numbers of referrals to gender clinics, and changes in sex ratios of patients, to the extent that he considers it a distinct phenomenon called "adolescent-onset gender dysphoria." (See, e.g., Cantor ¶¶ 69, 94, 130-132, 156 et seq.). As an initial matter, in his caricature of doctors pushing medical transition (or what he calls "affirmation-on-demand," see Cantor ¶ 347), Dr. Cantor seems to imply the field is ignoring and avoiding exploration of these developments. That is not the case. Indeed, the chapter on adolescents in WPATH SOC 8 specifically discusses the increase in referrals to gender clinics and the sex ratios of these young patients. (See WPATH SOC 8 at Chapter 6).

34. In support for his proposition that "adolescent-onset gender dysphoria" is a distinct phenomenon, Dr. Cantor relies and cites to cites a survey by Lisa Littman of participants on discussion websites for parents who opposed their children's gender transition and derived a theory that adolescents develop gender dysphoria via social contagion. This survey has been denounced by the World Professional Association for Transgender Health. The survey was of parents' perception after learning of their children's transgender identity, rather than of the children themselves, and conflicts with the experience of those who work with the children themselves. Littman had no relevant experience regarding gender affirming medical care, gender dysphoria, or transgender people prior to publishing the article, which suffered from flawed methodology, among other issues, such as recruiting parent participants from websites targeted at those skeptical of transgender identity. (Brandelli Costa, 2019; Restar, 2019). No conclusions can be drawn from the Littman survey other than the fact that some anonymous people recruited from internet sites who opposed transition care for youth speculate that transgender identity is due to social contagion. Indeed, the journal that published the Littman study retracted it, ordered a post-publication review, and republished the article with a correction notice (Littman, 2019), along with an apology (Heber, 2019). Senior leader of the Dutch research team Thomas Steensma has stated that the Dutch studies do not support the concept of an "adolescent-onset" gender dysphoria differing from gender dysphoria in other Dutch youth. (Broderick, 2023)

35. No study to date has demonstrated that the determinant of gender identity is psychosocial. Since the Littman article, new studies demonstrate that social contagion does not contribute to the development of gender dysphoria and that ROGD is not a phenomenon. (Bauer, et al., 2022; Turban, et al., 2022).

36. Dr. Cantor seems to attribute increases in youth experiencing gender dysphoria to social media. (Cantor ¶ 72, 156-157). But the rise in numbers of referrals is

hardly surprising given the greater awareness on the part of youth and their parents of what gender dysphoria is and that care is available, as well as the significant increase in the number of clinics available to provide care. In addition, the stigma associated with being transgender, while still significant, has lessened in recent years. Coming out to parents and seeking care are options that did not exist for many youth until recently, so an increase in numbers of referrals to gender clinics is not surprising. While there is a documented increase in clinic referrals, Dr. Cantor exaggerates the increase by making inappropriate comparisons.

37. Until the past decade, little data on the number of people identifying as transgender was available. From 2007 to 2009, a question asking whether the respondent identified as transgender was added to a large population-based health survey conducted in Massachusetts, and 0.5% of study participants identified as transgender. (Conron, et al., 2012). Since then, this question was added to large health surveys in other states, and analyses of surveys done in 2014 found that, nationally, 0.5-0.6% of adults identified as transgender, and 0.7% of youth ages 13 to 17 identified as transgender. (Crissman, et al., 2017; Flores, et al., 2016; Herman, et al., 2017).

38. While increases in numbers and changes in sex ratios of patients referred to some gender clinics have been reported, since the number of patients referred to gender clinics reflect only a small fraction of the people identifying as transgender, these changes may reflect changes in referral patterns to clinics rather than changes in the number of people identifying as transgender.

39. Sex ratios of patients vary from clinic to clinic and over time. When I was the psychiatrist for the Dimensions Clinic for transgender youth in San Francisco from 2003 to 2020, a consistent majority of my patients were assigned female at birth. Other clinics have had more assigned male at birth patients. The rise in numbers and percentage of patients assigned female at birth observed at some clinics in recent years is not surprising

given the historical development of the study of gender dysphoria in youth. The first large American study of gender non-conforming youth was the Feminine Boy Study at UCLA. There was significant societal discomfort with and rejection of boys who departed from sex stereotypes—the director of the study referred to them as "sissy boys" in the book resulting from the study—and these boys often experienced bullying from peers. In this context, boys who were perceived to be effeminate were the population brought in to psychiatrists by their parents and were the population that was initially studied by researchers. (Green, 1987). Parents were not as concerned about gender non-conforming girls as they were more socially accepted. There was also less awareness among the general public of the existence of transgender males and that transitioning was an option for individuals assigned female at birth who were experiencing gender dysphoria. The increase in awareness in recent decades made it possible for individuals who ultimately came to identify as transgender men to come out and seek care.

40. Ultimately, the diagnostic criteria for gender dysphoria are rigorous: if there were individuals claiming a transgender identity to fit into a peer group, they would not meet the criteria for a gender dysphoria diagnosis, let alone be deemed to need medical interventions.

H. Dr. Cantor's assessment of risks is based on baseless speculation.

41. Dr. Cantor speculates at length on the safety and efficacy of puberty blockers and hormones in gender dysphoric youth. The Endocrine Society and the Pediatric Endocrine Society have replied to efforts to limit care for youth by re-asserting that these treatments are safe and effective, and that treating gender dysphoria in youth has substantial health benefits. (e.g., Endocrine Society, 2022).

42. Dr. Cantor makes misleading assertions about Kuper, et al, 2020's findings on gender-affirming care and suicidal ideation and attempts. Dr. Cantor says Kuper shows

increased suicidal ideation and attempts after treatment than before—but the suicidality listed was for the 1-3 months before starting treatment compared to a much longer period 11-18 months after treatment, so of course more suicidality was recorded over a much longer period. The participants in Kuper showed benefit from treatment: a great improvement in body congruence.

43. Dr. Cantor states that Dhejne et al., supports increased suicidality in those who had gender affirming surgery—but this comparison is with the general population. There were 10 suicides in the national morbidity and mortality database involving trans people over a 30-year period, compared to 5 suicides in from the general population. The paper itself cautions against using this study as evidence of the effect of surgery on suicide. And Cecilia Dhejne has specifically called out misrepresentations of her study, stating: "The findings have been used to argue that gender-affirming treatment should be stopped since it could be dangerous (Levine, 2016) … Despite the paper clearly stating that the study was not designed to evaluate whether or not gender-affirming treatment is beneficial, it has been interpreted as such." (Dhejne, 2017).

44. Dr. Cantor states "No methodologically sound studies have provided meaningful evidence that medical transition reduces suicidality in minors." However, Kaltiala, et al. (2020), which is cited several times in Cantor's declaration in support of his assertions, and therefore presumably considered by Cantor a methodologically sound study, found that dramatically fewer youth (35% vs 4%) needed treatment for suicidality after starting gender-affirming hormones.

I. Gender-affirming medical care has long term benefits.

45. I have treated people ranging from adolescents to elders. And many of my patients have remained with me for decades, e.g., where a patient is on medications that

need to be monitored, and their medical transition was a positive health care decision not just in the short term but for the course of their lives.

46. Dr. Cantor's assertions regarding the incidence of regret and "detransition" are inconsistent with the data and my clinical experience. (See Cantor ¶¶ 175, 267-268). A study of all individuals receiving gender-affirming surgery in Sweden over 50 years (1960 to 2010) found a regret rate of 2.2.%, a percentage that only declined over the years. There were ten cases of regret from 1960 to 1980, and only five cases of regret total in the last 30 years that were reviewed, from 1981-2010. (Dhejne, et al., 2014). A meta-analysis of 27 studies which reported regret after gender-affirming surgery found that of 7928 people having gender-affirming surgery, the regret rate was 1%. (Bustos, et al., 2021).

47. In my experience, I have had some patients who halted their transition due to challenging personal circumstances—e.g., fear of losing family support— but they still had gender dysphoria. And some came back years later to resume their transition. I have also had patients discontinue medical treatment for other reasons, including being happy with the existing changes and continuing to live and identify as transgender. But in 30 years, I have never seen a patient who had undergone hormone therapy and surgery and later came to identify with their sex assigned at birth and regret the treatment they had received.

J. Dr. Cantor falsely claims a lack of consensus or science

48. Cantor writes, "The World Health Organization (WHO) has removed children and adolescents from its upcoming guidelines on transgender health, making explicit this was because of the lack of evidence." (Cantor ¶ 349). In fact, the WHO guidelines were for care of adults from the start. The WHO states, "From the initial consultations, it was agreed that the scope should focus on adults and not on children/adolescents….WHO has not conducted its own reviews related to children and

adolescents and has not made any recommendations on this subject."[6] Of note, WHO also states in this document that "Some countries have laws, regulations, policies and practices that present barriers to equal access to health care for trans and gender diverse people….These legal barriers have measurable, detrimental effects on the health of trans and gender diverse people, as shown by research."

49. Cantor spins fiction in the section headed, "C. Endocrinologists who prescribe gender-affirming hormone treatment demonstrate split opinion when surveyed, not consensus." The survey was of practices of adult endocrinology clinics. In some clinics, the hormone prescriber themselves does the psychosocial evaluation; in others a mental health professional does this evaluation. This is consistent with WPATH Standards of Care 7 (in effect when the survey was done in March 2022), which provides for flexibility on who does the psychosocial evaluation before hormone treatment in adults. The paper states, "The WPATH SOC Version 7 recommends that before initiating GAHT, the patient undergoes a psychosocial evaluation to document that they have persistent gender dysphoria and relevant medical or mental concerns are stable. Documentation of the factors mentioned above should come in the form of a referral from the mental health professional (MHP) (eg, clinical psychologist, social worker) who conducted the evaluation, with the caveat that in some cases, a qualified prescribing clinician (termed informed consent model) may perform the assessment. In 2017, the Endocrine Society published updated clinical practice guidelines, removing the obligation for a MHP to conduct the psychosocial evaluation of TGD individuals requesting GAHT. Instead, they recommend that any

[6] Frequently Asked Questions (FAQ), WHO development of the guideline on the health of trans and gender diverse people. 20 June 2024." Retrieved at https://cdn.who.int/media/docs/default-source/documents/gender/200624---tgd_faqupdates-final-v2.pdf?sfvrsn=68d5ab94_8

knowledgeable clinician with appropriate expertise, regardless of specialty, can perform the assessment."

50. Cantor fictionalizes, "Bisno et al. noted that this lack of thorough evaluation is consistent with guidelines published by special interest groups with a financial interest in administrating that therapy." (Cantor ¶ 353). In fact, Bisno notes that both WPATH and the Endocrine Society guideline require a thorough evaluation, and makes no inferences of "special interest groups" with "a financial interest" in treatment. That editorializing is entirely Cantor's, though falsely attributed to the paper's author, who was merely documenting how adult endocrinology clinics were following WPATH SOC 7 and the Endocrine Society guidelines.

51. Cantor falsely states, "The fact that almost half of surveyed physicians reported using criteria tighter than WPATH and the Endocrine Society indicates their belief that those guidelines provide insufficient protection from harm." (Cantor ¶ 354). The paper only documents that some clinics have the mental health professional do the psychosocial assessment and others have the endocrinologist do it, each practice supported by clinical guidelines. Many factors can contribute to this staffing decision, and neither practice is "tighter" than the other. The editorializing about "insufficient protection from harm" is entirely Cantor's creation.

52. Cantor asserts, "D. The American Academy of Pediatrics (AAP) now acknowledges that its 2018 policy statement on gender dysphoric children was not based on a systematic review of the relevant research." The American Academy of Pediatrics 2018 statement made recommendations for care backed by current literature and an understanding of principles of good care, and includes recommendations like," The GACM [Gender-Affirmative Care Model] is best facilitated through the integration of medical, mental health, and social services, including specific resources and supports for parents and families. Providers work together to destigmatize gender variance, promote the child's

self-worth, facilitate access to care, educate families, and advocate for safer community spaces where children are free to develop and explore their gender."

53. Cantor attempts to draw contrast between the practices in Europe and those in the US. In fact, the draft practice guidelines of experts from German-speaking countries of Europe (representing a larger population than the UK or Scandinavia) support the use of puberty blockers at Tanner stage 2, in line with WPATH recommendations.[7] The outliers, in fact, are the US states that have banned and criminalized the provision of gender-affirming care.

54. The assertion of a "rush to medicalization" in the US also is not supported by evidence. A recent study showed that in the US, only 25% of adolescents age 14-16 with a diagnosis of Gender Dysphoria started medical treatment within 2 years. (Locke, et al., 2024).

55. As for Dr. Cantor's "psychotherapy first" recommendation, the reality is that blocking access to programs offering gender-affirming medical care makes it less likely that the adolescent will receive needed psychotherapy. An example is the England's National Health Service. From January 2023 to July 2024, the NHS's youth gender program that replaced Tavistock GIDS provided mental health assessments to only 8 adolescents. The waitlist for these mental health assessments included 6,003 youth, as of July 2024. According to the NHS, as of July 2024, an adolescent on the waitlist for a mental health assessment can expect to wait 308 weeks for a mental health assessment, or until they are 17 years, 9 months of age, at which point they are removed from the waitlist and

[7] German Society for Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy(DGKJP). (2024). Draft version of the AWMF guideline: Gender incongruence and gender dysphoria in childhood and adolescence - diagnosis and treatment (S2k). AWMF Registry No. 028 – 014. English translation available at: https://www.amqg.ch/_files/ugd/e78aad_83e3b77cc9ad46cc81e9561b20ddd129.pdf.

referred back to their primary care provider. With a 6 year wait for a mental health assessment to initiate care, one would expect that adolescents are much more likely to come off the waitlist because they reach adulthood without a mental health assessment by the NHS, than to actually be assessed as adolescents by the NHS. The NHS has abdicated responsibility even for a mental health assessment. And as opposed to the assertions of some opponents of gender-affirming care, clearly the adolescents' gender dysphoria isn't resolving on its own during this 6 years on the waitlist for just a mental health assessment, as the waitlist grows longer month-by-month.[8] During the same 1 ½ years that the National Health Service of England's new youth gender program provided mental health assessments to only 8 young people, former NHS clinicians at a private clinic providing mental health assessment, psychotherapy, and hormones to adolescents evaluated 388 new patients.[9]

56. In fact, there is no evidence that psychotherapy alone or doing nothing will resolve gender dysphoria in those youth referred for medical care. Disruptions of systems of care for transgender youth by gender-affirming mental health providers are happening as the need for mental health care grows. In a recent study, American transgender youth who were being followed over time had sharp increases in suicidality after their state of residence passed anti-transgender laws. Enacting state-level anti-transgender laws increased incidents of past-year suicide attempts among transgender and non-binary young people aged 13-17 by 7–72%. (Lee, et al, 2024). There is no evidence to support the pretense that transgender care bans benefit transgender youth, only evidence of harm.

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[8] (Freedom of Information Request (Our Ref: FOI - 2409-2139204) NHSE:0141451 https://docs.google.com/document/d/1neOdLdAPHD6wTikLi9s7Y1AFxrOR9FZQjoMvxKIyJGk/mobilebasic?usp=gmail)

[9] https://www.genderplus.com/statement

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this 15th day of November 2024.

Dan H. Karasic, M.D.

EXHIBIT C

SUPPLEMENTAL BIBLIOGRAPHY

Achille, C., Taggart, T., Eaton, N. R., Osipoff, J., Tafuri, K., Lane, A., & Wilson, T. A. (2020). Longitudinal impact of gender-affirming endocrine intervention on the mental health and well-being of transgender youths: preliminary results. International journal of pediatric endocrinology, 2020, 8.

American Psychiatric Association. (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.). Arlington, VA: American Psychiatric Publishing.

Bauer, G. R., Lawson, M. L., Metzger, D. L., & Trans Youth CAN! Research Team (2022). Do Clinical Data from Transgender Adolescents Support the Phenomenon of "Rapid Onset Gender Dysphoria"?. The Journal of pediatrics, 243, 224–227.e2.

Brandelli Costa A. (2019). Formal comment on: Parent reports of adolescents and young adults perceived to show signs of rapid onset gender dysphoria. PloS one, 14(3), e0212578.

Brik, T., Vrouenraets, L. J. J. J., de Vries, M. C., & Hannema, S. E. (2020). Trajectories of Adolescents Treated with Gonadotropin-Releasing Hormone Analogues for Gender Dysphoria. Archives of sexual behavior, 49(7), 2611–2618.

Broderick, T. "Evidence Undermines 'Rapid Onset Gender Dysphoria' Claims," Scientific American (Aug. 24, 2023), https://www.scientificamerican.com/article/evidence-undermines-rapid-onset-gender- dysphoria-claims/.

Bustos, V. P., Bustos, S. S., Mascaro, A., Del Corral, G., Forte, A. J., Ciudad, P., Kim, E. A., Langstein, H. N., & Manrique, O. J. (2021). Regret after Gender-affirmation Surgery: A Systematic Review and Meta-analysis of Prevalence. Plastic and reconstructive surgery. Global open, 9(3), e3477.

Chong, M.C., Sharp, M.K., Smith, S.M. et al. (2023). Strong recommendations from low certainty evidence: a cross-sectional analysis of a suite of national guidelines. BMC Med Res Methodol 23, 68.

Coleman, E., Radix, A. E., Bouman, W. P., Brown, G. R., de Vries, A. L. C., Deutsch, M.B., Ettner, R., Fraser, L., Goodman, M., Green, J., Hancock, A. B., Johnson, T. W., Karasic, D. H., Knudson, G. A., Leibowitz, S. F., Meyer-Bahlburg, H. F. L., Monstrey, S. J., Motmans, J., Nahata, L., Nieder, T. O., … Arcelus, J. (2022). Standards of Care for the Health of Transgender and Gender Diverse People, Version 8. International journal of transgender health, 23(Suppl 1), S1–S259.

Coleman, E., Bockting, W., Botzer, M., Cohen-Kettenis, P., DeCuypere, G., Feldman, J.,... & Zucker, K. (2012). Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. International Journal of Transgenderism, 13(4), 165-232.

Conron, K. J., Scott, G., Stowell, G. S., & Landers, S. J. (2012). Transgender health in Massachusetts: results from a household probability sample of adults. American journal of public health, 102(1), 118–122.

Conway, A., Conway, Z., Soalheira, K., & Sutherland, J. (2017). High quality of evidence is uncommon in Cochrane systematic reviews in Anaesthesia, Critical Care and Emergency Medicine. European journal of anaesthesiology, 34(12), 808–813.

Crissman, H. P., Berger, M. B., Graham, L. F., & Dalton, V. K. (2017). Transgender

Demographics: A Household Probability Sample of US Adults, 2014. American journal of public health, 107(2), 213–215.

de Vries, A. L. C., Beek, T. F., Dhondt, K., de Vet, H. C. W., Cohen-Kettenis, P. T., Steensma, T. D., & Kreukels, B. P. C. (2021). Reliability and Clinical Utility of Gender Identity-Related Diagnoses: Comparisons Between the ICD-11, ICD-10, DSM-IV, and DSM-5. LGBT health, 8(2), 133–142.

de Vries, A. L. C., McGuire, J. K., Steensma, T. D., Wagenaar, E. C. F., Doreleijers, T. A. H., & Cohen-Kettenis, P. T. (2014). Young Adult Psychological Outcome After Puberty Suppression and Gender Reassignment. Pediatrics, 134(4), 696-704.

de Vries, A. L., Steensma, T. D., Doreleijers, T. A., & Cohen-Kettenis, P. T. (2011). Puberty suppression in adolescents with gender identity disorder: a prospective follow-up study. The journal of sexual medicine, 8(8), 2276–2283.

Dhejne, C. H. (2017). Science AMA Series: I'm Cecilia Dhejne a fellow of the European Committee of Sexual Medicine, from the Karolinska University Hospital in Sweden. I'm here to talk about transgender health, suicide rates, and my often misinterpreted study. Ask me anything! Winnower 10:e150124.46274.

Dhejne, C., Öberg, K., Arver, S., & Landén, M. (2014). An analysis of all applications for sex reassignment surgery in Sweden, 1960-2010: prevalence, incidence, and regrets. Archives of sexual behavior, 43(8), 1535–1545.

Dhejne, C., Lichtenstein, P., Boman, M., Johansson, A. L., Långström, N., & Landén, M. (2011). Long-term follow-up of transsexual persons undergoing sex reassignment surgery: cohort study in Sweden. PloS one, 6(2), e16885.

Endocrine Society. Press release: Endocrine Society alarmed at criminalization of transgender medicine (Feb. 23, 2022). Available from https://www.endocrine.org/news-and-advocacy/news-room/2022/endocrine-society-alarmed-at-criminalization-of-transgender-medicine.

Fleming, P. S., Koletsi, D., Ioannidis, J. P., & Pandis, N. (2016). High quality of the evidence for medical and other health-related interventions was uncommon in Cochrane systematic reviews. Journal of clinical epidemiology, 78, 34–42.

Flores, A.R., Herman, J.L., Gates, G.J., & Brown, T.N.T. (2016). How Many Adults Identify as Transgender in the United States? Los Angeles, CA: The Williams Institute. Retrieved from https://escholarship.org/uc/item/2kg9x2rk.

German Society for Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy (DGKJP). (2024). Draft version of the AWMF guideline: Gender incongruence and gender dysphoria in childhood and adolescence - diagnosis and treatment (S2k). AWMF Registry No. 028 – 014. English translation available at: https://www.amqg.ch/_files/ugd/e78aad_83e3b77cc9ad46cc81e9561b20ddd129.pdf.

Green, R. (1987). The "sissy boy syndrome" and the development of homosexuality. Yale University Press.

Hatswell, A. J., Baio, G., Berlin, J. A., Irs, A., & Freemantle, N. (2016). Regulatory approval of pharmaceuticals without a randomised controlled study: analysis of EMA and FDA approvals 1999-2014. BMJ open, 6(6), e011666.

Heber, J. Correcting the scientific record on gender incongruence – and an apology, PLoS one (Mar. 19, 2019), https://everyone.plos.org/2019/03/19/correcting-the-scientificrecord-and-anapology/.

Hembree, W. C., Cohen-Kettenis, P. T., Gooren, L., Hannema, S. E., Meyer, W. J., Murad,M. H., Rosenthal, S. M., Safer, J. D., Tangpricha, V., & T'Sjoen, G. G. (2017). Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. The Journal of clinical endocrinology and metabolism, 102(11), 3869–3903.

Herman, J. (2013). Costs and Benefits of Providing Transition-related Health Care Coverage in Employee Health Benefits Plans: Findings from a Survey of Employers. UCLA: The Williams Institute. Retrieved from https://escholarship.org/uc/item/5z.

Howick, J., Koletsi, D., Pandis, N., Fleming, P. S., Loef, M., Walach, H., Schmidt, S., & Ioannidis, J. P. A. (2020). The quality of evidence for medical interventions does not improve or worsen: a metaepidemiological study of Cochrane reviews. Journal of clinical epidemiology, 126, 154–159.

Kaltiala, R., Heino, E., Työläjärvi, M., & Suomalainen, L. (2020). Adolescent development and psychosocial functioning after starting cross-sex hormones for gender dysphoria. Nordic journal of psychiatry, 74(3), 213–219.

Kuper, L. E., Stewart, S., Preston, S., Lau, M., & Lopez, X. (2020). Body Dissatisfaction and Mental Health Outcomes of Youth on Gender-Affirming Hormone Therapy. Pediatrics, 145(4), e20193006.

Lee, W.Y., Hobbs, J.N., Hobaica, S. *et al.* State-level anti-transgender laws increase past-year suicide attempts among transgender and non-binary young people in the USA. *Nat Hum Behav* (2024). https://doi.org/10.1038/s41562-024-01979-5

Littman L. (2019). Correction: Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. PloS one, 14(3), e0214157.

Littman L. (2018). Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. PloS one, 13(8), e0202330.

Locke, E., Highland, K., Thorntno, J. (2024). Time to Gender-Affirming Hormone Therapy Among US Military-Affiliated Adolescents and Young Aadults. JAMA Pediatr. 2024;178(10):1049-1056. doi:10.1001/jamapediatrics.2024.2835

Ludvigsson, J. F., Adolfsson, J., Höistad, M., Rydelius, P. A., Kriström, B., & Landén, M. (2023). A systematic review of hormone treatment for children with gender dysphoria and recommendations for research. Acta paediatrica, 112(11), 2279–2292.

McNamara, M., Baker, K., Connelly, K., et al. (2024). An Evidence-Based Critique of "The Cass Review" on Gender-affirming Care for Adolescent Gender Dysphoria.Available at: https://law.yale.edu/sites/default/files/documents/integrity-project_cassresponse.pdf.

Movsisyan, A., Melendez-Torres, G. J., & Montgomery, P. (2016). Outcomes in systematic reviews of complex interventions never reached "high" GRADE ratings when compared with those of simple interventions. Journal of clinical epidemiology, 78, 22– 33.

Rae, J. R., Gülgöz, S., Durwood, L., DeMeules, M., Lowe, R., Lindquist, G., & Olson, K.R. (2019). Predicting Early-Childhood Gender Transitions. Psychological science, 30(5), 669–681.

Restar, A.J. (2020). Methodological Critique of Littman's (2018) Parental-Respondents Accounts of "Rapid-Onset Gender Dysphoria". Arch Sex Behav 49, 61–66.

Steensma, T. D., McGuire, J. K., Kreukels, B. P., Beekman, A. J., & Cohen-Kettenis, P. T. (2013). Factors associated with desistence and persistence of childhood gender dysphoria: a quantitative follow-up study. Journal of the American Academy of Child and Adolescent Psychiatry, 52(6), 582–590.

Steensma, T. D., Biemond, R., de Boer, F., & Cohen-Kettenis, P. T. (2011). Desisting and persisting gender dysphoria after childhood: a qualitative follow-up study. Clinical child psychology and psychiatry, 16(4), 499–516.

Turban, J. L., Dolotina, B., King, D., & Keuroghlian, A. S. (2022). Sex Assigned at Birth Ratio Among Transgender and Gender Diverse Adolescents in the United States. Pediatrics, 150(3), e2022056567.

van der Loos, M. A. T. C., Klink, D. T., Hannema, S. E., Bruinsma, S., Steensma, T. D., Kreukels, B. P. C., Cohen-Kettenis, P. T., de Vries, A. L. C., den Heijer, M., & Wiepjes,

C. M. (2023). Children and adolescents in the Amsterdam Cohort of Gender Dysphoria: trends in diagnostic- and treatment trajectories during the first 20 years of the Dutch Protocol. The journal of sexual medicine, 20(3), 398–409.

Wiepjes, C. M., Nota, N. M., de Blok, C. J. M., Klaver, M., de Vries, A. L. C., Wensing-Kruger, S. A., de Jongh, R. T., Bouman, M. B., Steensma, T. D., Cohen-Kettenis, P.,

Gooren, L. J. G., Kreukels, B. P. C., & den Heijer, M. (2018). The Amsterdam Cohort of Gender Dysphoria Study (1972-2015): Trends in Prevalence, Treatment, and Regrets. The journal of sexual medicine, 15(4), 582–590.

Wittich, C. M., Burkle, C. M., & Lanier, W. L. (2012). Ten common questions (and their answers) about off-label drug use. Mayo Clinic proceedings, 87(10), 982–990.

World Health Organization. (2018). Gender Incongruence. In International Classification of Diseases, 11th Revision. https://icd.who.int/browse11/l-m/en#/http%3a%2f%2fid.who.int%2ficd%2fentity%2f411470068.